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Grasshopper nymphs in northwest Iowa

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Abstract
Extension field specialists in crops in western and northern Iowa are reporting an abundance of grasshopper nymphs beginning to feed at field edges. All reports so far mention feeding in soybean fields, generally in rows adjacent to grassy areas.

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 [1] **Grasshopper nymphs defoliating soybean leaves.**

In the past, treatment thresholds were determined by counting the number of grasshoppers per square yard. However, counting grasshoppers in either corn or soybean is almost impossible because they are either partially hidden in the foliage, or they constantly hop out of the area you're trying to count. It usually is not too difficult to determine if grasshoppers are abundant, so stop trying to count the number per square yard. New treatment thresholds are determined by percentage of leaf defoliation. By focusing on the amount of leaf defoliation, you can use a nominal threshold (based on experience) and common sense about managing grasshoppers.

In soybean, consider treatment if grasshoppers are present and defoliation reaches 40 percent in the vegetative stages or 20 percent in the pod-forming and pod-filling stages. Determine the exact location of grasshoppers in the field and spray only those areas. Grasshoppers often are concentrated along field edges or waterways but they sometimes occur in large areas in the center of the field, especially if weeds were present last year. Reductions in yield can occur during any crop stage, although pod-forming and pod-filling stages are at greater risk than other plant stages. Soybean plants can compensate for considerable foliage loss, and a 40 percent leaf loss during any vegetative stage will result in only a 3-7 percent yield reduction. Percentage of leaf defoliation during pod-forming and pod-filling stages is highly comparable to percentage of yield loss. A 20 percent defoliation during reproductive stages will result in about a 20 percent yield reduction.

Grasshoppers in corn are usually more of a late-summer pest. Corn injury is more likely to occur in late July through harvest. Consider treatment if grasshoppers are clipping silks or ear tips, or are removing large amounts of foliage above the ear leaf. As we approach late summer, monitor cornfields for grasshopper problems.

In all crops, remember that grasshopper nymphs eventually will become adults and cause more leaf loss during late July, August, and September. Nymphs should not be sprayed until injury approaches a level that could cause economic yield loss. This may not occur until nymphs become adults. Fortunately, some insecticides provide excellent control of adult

grasshoppers. Another consideration before spraying is that a naturally occurring fungus can reduce hopper populations, meaning that economic damage may not occur in the field. Always rescout your fields prior to spraying. Do not rely on early reports of pest problems.

Recommended insecticides and product per acre for grasshopper control in corn and soybean.

Product	Rate per acre
Asana XL0.66EC*	5.8-9.6 ounces
Cygon 400	1 pint
Furadan 4F*	0.25-0.5 pint
Lorsban 4E	0.5-1 pint
Penncap-M*	2-3 pints
Sevin XLR+	2-3 pints
Warrior 1EC*	2.56-3.84 ounces (corn)

*Restricted-use pesticide.

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